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MEMORANDUM

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PA 90-A
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TO: Mr. Herbert A. Tessler, Supervisor -- Functional Coordination
FROM: Irv Soffer
DATE: October 14, 1964
SUBJECT: FIRE TEST -- JOHNS-MANVILLE "MARINITE"

REFERENCE:

COPY TO: Messrs. L. Feld, M. Levy, C. Panero

A meeting was held on October 9, 1964, at the J-M Research Center in Manville, New Jersey, to observe a fire test on "Marinite" fireproofing proposed for the exterior tower columns. Messrs. Joseph Solomon (ER&S), Carl Panero, Irv Soffer (World Trade Center Planning Division), Bob Barton of ALCOA and various members of the Johns-Manville staff attended the meeting.

A steel box column, simulating the lightest members on the upper floors, was fabricated and encased with 1'-3/4" thick "Marinite". The 12-ft. high steel column was ringed at 3 locations with a steel strap, separated from the column, and the "Marinite" was fastened to the strap by steel set screws. The edges of the "Marinite" were not mechanically joined but only butted against each other.

The test installation was performed in a vertical oven. Thermocouples were connected to the steel column and instrumented to a control room console. Flame heat was to be applied for 4 hours at 1,900 to 2,000°F. Recordings were made of the sink temperatures of the steel column. The average temperature of the column must not exceed 1200°F to pass the test. The test failed because the column temperature reached 1200°F after 2 hours and 22 minutes.

We observed the column encasement after the test. The corner joints were open and the set screws that fastened the "Marinite" had loosened. Johns-Manville Research and Development will send us their official test data, observations, and conclusions. This 4-hour test was the first one that they had performed for this particular application. It appeared that the "Marinite" was performing properly, and the failure was caused by the method of enclosure and fastening.

I suggest that arrangements be made to observe similar applications of the other major competitor's material, particularly Gypsum.

Irv Soffer

ILS:CKP:rt

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